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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,630	02/20/2004	Tsunemoto Suzuki	16NM02112	7201

7590 09/29/2005  
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EXAMINER

SHIPMAN, JEREMIAH E

ART UNIT PAPER NUMBER

2859

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/783,630

Applicant(s)

SUZUKI ET AL.

Examiner

Jeremiah Shipman

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20Feb04; 27Apr05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Dejon et al. (US 4,852,780). Dejon et al. disclose an RF shield **31** for MRI systems (col 1, lines 1-12), wherein an RF shield is grounded through a capacitor **7**.

Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Richard et al. (US 5,592,087).

Regarding claims 1 and 4, Richard et al. teach an RF shield (col 4, lines 15-23) for MRI systems (col 1, line 7-8), wherein the RF shield is grounded through a capacitor (col 4, lines 54-55; col 4 line 66 – col 5, line 1; col 5, lines 44-46; an RF shield **72** is connected to ground at points **76** both directly and through the capacitor formed by the sandwich of shield conductors **72**, **74** and shield insulator **62** and gaps **70**).

Regarding claim 3, Richard et al. teach that the capacitance is maximized in order to maximize current flow (col 5, lines 12-14; using this principle, Eq.1, the dimensions given in col 4, lines 37-42, and Fig. 3 for guidance, it is seen that the capacitance used by Richard et al. is larger than 1000pF).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dejon et al.. Dejon et al. further disclose that capacitor 7 is variable, and hence may be set to the smallest value or to a value above 1000 pF. A person of ordinary skill in the art at would have found it obvious at the time of the invention to set these values accordingly in order to tune the circuit to the appropriate RF frequency (Dejon, col 4, lines 44-56), so that the coil and shield would function as intended.

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richard et al. in view of Carlson (US 5,304,932). Richard et al. teach an MRI system comprising an RF shield, wherein the RF shield is grounded through capacitors (col 4, lines 54-55; col 4 line 66 – col 5, line 1; col 5, lines 44-46; an RF shield 72 is connected to ground at points 76 both directly and through the capacitor formed by the sandwich of shield conductors 72, 74 and shield insulator 62 and gaps 70) at four or more points whose directions are different from one another by an equal angle (col 4, lines 50-54). Richard does not teach the use of such a shield in a vertical field-type MRI system.

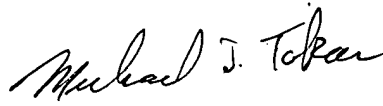
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Carlson teaches teaches a vertical field-type MRI system (Fig 1) comprising upper and lower RF shields (Fig 1, 2), which is coupled to ground only through capacitances (col 4, line 39-41). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Carlson to the teachings of Richard et al. in order to gain the conventional advantages of a vertical-field type MRI system, such as access to the patient.

Regarding claim 8, Richard et al. further teach that the capacitance is maximized in order to maximize current flow (col 5, lines 12-14; using this principle, Eq.1, the dimensions given in col 4, lines 37-42, and Fig. 3 for guidance, it is seen that the capacitance used by Richard et al. is larger than 1000pF).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS

  
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